**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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| **In Re Application:** | **For:** | **ADAPTING OPERATION OF A COMMUNICATION FILTER BASED ON MOBIL UNIT VELOCITY** |
| **Parvathanathan Subrahmanya** | | |
| **Application No.: 10/632,411** | | |
| **Filed: August 1, 2003** | **Examiner:** | **Doan, Kiet M** |
| **Confirmation No.: 4378** | **Group No.:** | **2617** |
| | **Docket No.:** | **020133** |

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Kindly enter the subject Pre-Appeal Brief Request for Review along with the accompanying Notice of Appeal.

**REMARKS**

In accordance with the OG Notice dated 12 July 2005, the Applicants respectfully submit the subject request for panel review. Claims 1-54 are pending in the subject application.

**REJECTION UNDER 35 U.S.C. § 102**

Claim 1 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Kubo et al. U.S. Patent No. 6,249,682. In view of the errors in facts set forth below, it is respectfully submitted that a prima facie anticipation rejection has not been made.

**1. Kubo et al. receives TPC information on a Forward *Traffic* Channel**

The Applicant has provided a more detailed explanation of Kubo et al. in the Response dated December 14, 2006, at pages 12-14. The explanation is summarized below.

FIG. 4 and FIG. 5 of Kubo et al. illustrate generation of an ***internal*** TPC Command ("+1" or "-1") in the mobile station. See col. 6, ln. 50-52. FIG. 4 of Kubo et al. (which is a DS-CDMA system) shows that information needed to form the TPC Command is obtained from antenna 191.

CDMA Channels are used by Kubo et al. to transmit data. See col. 1, ln. 21-28. The allocation of data in the DS-CDMA channels of Kubo et al. are set forth by, e.g., standard TIA/EIA-98-C.

The Forward CDMA Channel (i.e. the from the base station to the mobile station) has four separate types of channels, namely: the Pilot Channel, Sync Channel, Paging Channels, and Traffic Channels. See EXHIBIT A, page 1-3, ln. 35 (Attached to Applicant's Response dated 12/14/2006). However, the base station must control the power of each mobile station *individually* in order to address the distance from the base station (i.e. near-far problem) and to address instantaneous fluctuation (i.e. fading) due to multi-path. See Kubo et al. at col. 1, ln. 35-40. The standard TIA/EIA-98-C provides for individualized power control by transmission of a Power Control Bit as follows:

> **Power Control Bit**. A bit sent in every 1.25 ms interval on the ***Forward Traffic Channel*** that signals the mobile station to increase or decrease its transmitted power. See EXHIBIT A, page 1-6, ln. 11-12.

The Kubo et al. receiving station receives its TPC Command information from a Forward Traffic Channel and ***not*** from the Forward Pilot Channel. Thus, because moving average filter 243 receives information from the traffic channel it does not operate as a pilot filter, and teaches away from operation as the claimed pilot filter by using traffic channel data.

**2. Kubo et al. does not teach Pilot Filter *Coefficients***

Claim 1 sets forth "determining one or more *coefficients* of the pilot filter based on the determined velocity of the wireless communication device."

In short, the Kubo moving average filter 243 simply ***does not*** have coefficients. However, this makes sense. The purpose of the Kubo et al. is to ***correlate*** changes in the TPC Command to estimate speed of the mobile receiver. In other words, the base station requests changes to mobile station transmit power (by way of the Power Control Bit, i.e. TPC Commands) based upon distance. The distance changes per unit time as the mobile station

becomes closer or farther away from the base station. Thus, Kubo et al. must slow down the changes in the TPC Commands to obtain mobile station speed.

TPC Commands are accumulated by Kubo et al. to determine the average value. Turning now to FIG. 10 of Kubo et al., moving average filter 243 adds together a series of ***time delayed*** TPC Commands. But, the TPC Commands can only be +1 or -1. See col. 6, ln. 52. Thus, FIG. 10 uses delay circuit 241 and EX_NOR gate 242 to only output a logic "1" to filter 243 when the TPC Commands steadily increase or decrease, or a logic "0" when the TPC Commands oscillate. See col. 7, ln. 15-23. Thus, moving average filter 243 will ***only*** "accumulate" when the TPC Commands are continually increasing ("+1") indicating that the mobile station is moving away or continually decreasing ("-1") indicating that the mobile station is moving closer.

Coefficients ***can not*** be added to moving average filter 243. If coefficients were added to moving average filter 243, this would ***destroy*** the accumulated speed information by changing the stored accumulated value.

In other words, the moving average filter 243 of Kubo et al. teaches away from determining one or more coefficients of the pilot filter as claimed in claim 1.

**3. Kubo et al. does not input speed data into moving average filter 243**

Further, the estimated value (i.e. the determined speed data) is the ***output*** from FIG. 10 of Kubo et al. (and likewise from FIG. 11, FIG. 15, and FIG. 17), and does not loop in any way to control the operation of moving average filter 243.

On the other hand, claim 1 particularly sets forth "determining one or more coefficients of the pilot filter based on ***the determined*** velocity of the wireless communication device."

Accordingly, Kubo et al. fails to teach every claimed element of claim 1, as required by 35 U.S.C. § 102(e) and M.P.E.P. § 2131. Moreover, Kubo et al. fails to suggest, and even teaches away from every claimed element, as required by 35 U.S.C. § 103(a) and M.P.E.P. § 2143.

Reconsideration and withdrawal of the outstanding anticipation rejection as applied to claim 1 is respectfully requested.

**REJECTION UNDER 35 U.S.C. § 103**

In short, all obviousness rejections rely upon ***Kubo et al.*** or ***Akiyama*** alone or in combination. Akiyama is also sought to be combined with Corbett. The correct interpretation of the primary reference to Kubo et al. is set forth above. Coefficients ***can not*** be added to the ***Kubo et al.*** moving average filter 243. This would ***destroy*** the accumulated speed information in ***Kubo et al.*** by changing the stored accumulated value. All combinations with Kubo et al. cannot therefore support a prima facie obviousness rejection.

**1. Akiyama, U.S. Patent No. 6,907,026**

The Office Action at page 4, relies upon Akiyama, FIG. 6, and col. 4, ln. 36-51, col. 11, ln. 37-67, and col. 12, ln. 1-35 as teaching "one or more coefficients ***are performed*** in the wireless communication device/network infrastructure." The Office Action relies upon the Akiyama second embodiment illustrated in FIG. 6 and generally discussed at col. 11, ln. 56.

By way of review, in Akiyama "[t]he ***Operator*** can control to turn on and off a switch 17a by the control circuit 18 by means of the operation unit 17, so that the received pilot signals CP are supplied to the frequency-direction interpolation circuit 8 through the noise reduction LPF 14 or directly without passing through the noise reduction LPF 14." See col. 11, ln. 66 to col. 12, ln. 4. This is a ***manual operation***, and therefore, the coefficients are not actively performed as suggested by the Office Action, but rather remain passive and are selected by a manual switch (operation unit 17).

On the other hand, the claims specify that the coefficient of the pilot filter be ***based on*** the velocity of the device."

It is respectfully submitted that the Office Action of June 19, 2006 has over looked the ***manual operation*** of the Akiyama operation unit 17. The Akiyama filter selection is based on operator selection of operation unit 17.

**1a. No combination of Akiyama (OFDM) with Kubo (CDMA) or Corbett (CDMA)**

Moreover, the OFDM pilot signals of Akiyama are completely incompatible with CDMA pilot signals of Kubo et al. (or Corbett), as both relate to separate technology. CDMA pilot signals are despread and then decovered with a channelization code, such as a Walsh code (for e.g. IS-95, cdma2000, etc.) or an OVSF code (for e.g., W-CDMA). See Application at pg. 11, ¶

[0046]. On the other hand, the Akiyama OFDM system has approximately 1,400 carriers. See Akiyama at col. 1, ln. 42. Thus, the OFDM pilot signals are scattered both in the frequency direction and the time direction to form a scattered pilot signal "SP". See Akiyama at col. 2, ln. 15-18, and as illustrated in FIG. 7, FIG. 8.

Thus, the OFDM pilot signals of Akiyama are completely different from and incompatible with the CDMA pilot signals of Kubo et al. (or Corbett) and cannot be combined in accordance with the principals of 35 U.S.C. § 103.

Reconsideration and withdrawal of the outstanding obviousness rejection over all combinations of Kubo et al., the combination of Akiyama and Kubo et al., and the combination of Akiyama with the CDMA Corbett reference are respectfully requested.

CONCLUSION

The Commissioner is hereby authorized to charge any fees which may be required to Deposit Account No. 17-0026 in the name of QUALCOMM, Incorporated.

Respectfully submitted,

Dated: December 19, 2006

/Todd E. Marlette/
Todd E. Marlette, Reg. No. 35,269
Phone: (858) 651-7985

QUALCOMM Incorporated
Attn: Patent Department
5775 Morehouse Drive
San Diego, California 92121
Telephone: (858) 845-4265
Facsimile: (858) 658-2502